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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 09/598,984 | 06/21/2000 | Besma Kraiem | 450117-02628 | 6533 |

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C. IRVIN MCCLELLAND
OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C.
1940 DUKE STREET
ALEXANDRIA, VA 22314

| EXAMINER | |
|---|---|
| LY, NGHI H | |

| ART UNIT | PAPER NUMBER |
|---|---|
| 2617 | |

DATE MAILED: 09/27/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

| Office Action Summary | Application No. | Applicant(s) | |
|---|---|---|---|
| | 09/598,984 | KRAIEM ET AL. | |
| | Examiner | Art Unit | |
| | Nghi H. Ly | 2617 | |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☒ Responsive to communication(s) filed on *20 July 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) *1-18 and 20-31* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-18 and 20-31* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

The Art Unit location of your application in the USPTO has changed. To aid in correlating any papers for this application, all further correspondence regarding this application should be directed to Art Unit 2617.

## DETAILED ACTION

### *Continued Examination Under 37 CFR 1.114*

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 7/20/06 has been entered.

### *Response to Arguments*

2. Applicant's arguments with respect to claims 1-18 and 20-31 have been considered but are moot in view of the new ground(s) of rejection.

### *Claim Rejections - 35 USC § 103*

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein

were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. Claims 1-5, 7-9, 11-14, 18, 20-24, 26-28, 30 and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bradshaw, Jr. (US 6,236,854) in view of Wellard et al (US 5,862,477) in view of Zamat (US 6,321,068).

Regarding claim 1, Bradshaw teaches a method to create a topology map of a wireless network (see fig.1, and column 4, lines 9-13, see "network topology"), wherein said wireless network includes a plurality of network devices (see fig.1), wherein said network devices include mobile network devices provided for direct wireless communication in-between each other (see fig.1, wireless connection in-between devices).

Bradshaw does not specifically disclose a method to create a topology map indicating the quality of connectivity of each of said plurality of network devices with all other network devices of said of plurality of network devices, comprising: performing a measurement phase in which a calibration signal is successively broadcasted by each network device and in which all respective other network devices receiving the calibration signal measure the received signal quality and performing a reporting phase in which the measurement results are transmitted from each network device to the

network device creating the topology map, and performing a creating phase in which the topology map of the network is created within the network device creating the topology map on basis of all received measurement results.

Wellard teaches a method to create a topology map indicating the quality of connectivity of each of said plurality of network devices (see fig.3, wireless connection between cordless fix parts 34, 36 and cordless portable parts 38, 40, and see column 4, line 66 to column 5, line 3) with all other network devices of said of plurality of network devices (see Abstract, and see fig.3, wireless connection between cordless fix parts 34, 36 and cordless portable parts 38, 40, and see column 4, line 66 to column 5, line 3), comprising: performing a measurement phase in which a calibration signal is successively broadcasted by each network device (see fig.2) and in which all respective other network devices receiving the calibration signal measure the received signal quality (see column 3, lines 14-30) and performing a reporting phase in which the measurement results are transmitted from each network device to the network device creating the topology map (see Abstract), and performing a creating phase in which the topology map of the network is created within the network device creating the topology map on basis of all received measurement results (also see column 3, lines 14-30).

The combination of Wellard and Bradshaw does not specifically disclose performing a reporting phase in which the measurement results are wirelessly transmitted from each network device to the network device.

Zamat teaches disclose performing a reporting phase in which the measurement results are wirelessly transmitted from each network device to the network device (see

Abstract, column 1, line 24 to column 2, line 45, and column 3, line 7 to column 4, line 34).

Therefore, it would have been obvious to one of the ordinary skill in the art at the time the invention was made to provide the above teaching of Zamat to the system of Wellard and Bradshaw so that during the operation, the SSI processor accurately determines the transmitted signal strength by processing the transmitted signal (see Zamat, column 4, lines 31-34).

Regarding claim 2, the combination of Wellard, Bradshaw and Zamat further teaches the calibration signal is transmitted in a dedicated control channel (see Wellard, column 4, lines 52-57).

Regarding claim 3, the combination of Wellard, Bradshaw and Zamat further teaches the measurement results are reported in a respective dedicated control channel (see Wellard, column 4, lines 52-57).

Regarding claim 4, the combination of Wellard, Bradshaw and Zamat further teaches the calibration signal is transmitted with the maximum allowed transmit power level (see Wellard, column 6, lines 29-33).

Regarding claim 5, the combination of Wellard, Bradshaw and Zamat further teaches the topology map is updated when a new network device joins the network (see Wellard, column 8, line 58 to column 9, line 3).

Regarding claim 7, Wellard further teaches the topology map is stored in the central controller of the wireless network (see Wellard, column 6, lines 11-16 and column 9, lines 58-60).

Regarding claim 8, the combination of Wellard, Bradshaw and Zamat further teaches topology map is broadcasted in the whole network (see Wellard, fig.2).

Regarding claim 9, the combination of Wellard, Bradshaw and Zamat further teaches only the parts of the topology map related to a specific network device are transmitted to specific network device (see Wellard, column 5, lines 46-52).

Regarding claim 11, the combination of Wellard, Bradshaw and Zamat further teaches the contents of the topology map are codes that are mapped to receive power values (see Wellard, column 3, lines 25-28).

Regarding claim 12, the combination of Wellard, Bradshaw and Zamat further teaches the measurement phase and/or reporting phase is initiated by the network device creating the topology map (see Wellard, column 3, lines 14-28).

Regarding claim 13, claim 13 is rejected with the similar reason as set forth in claim 1 above.

Regarding claim 14, the combination of Wellard, Bradshaw and Zamat further teaches characterized in that the functions are performed on demand of another network device or on an internal demand (see Zamat, column 1, lines 41-52).

Regarding claim 18, claim 18 is rejected with the similar reason as set forth in claim 1 above.

Regarding claim 20, claim 20 is rejected with the similar reason as set forth in claim 1 above.

Regarding claim 21, the combination of Wellard, Bradshaw and Zamat further teaches the calibration signal is transmitted in a dedicated control channel (see Wellard, column 4, lines 52-57).

Regarding claim 22, the combination of Wellard, Bradshaw and Zamat further teaches the measurement results are reported in a respective dedicated control channel (see Wellard, column 4, lines 52-57).

Regarding claim 23, the combination of Wellard, Bradshaw and Zamat further teaches the calibration signal is transmitted with the maximum allowed transmit power level (see Wellard, column 6, lines 29-33).

Regarding claim 24, the combination of Wellard, Bradshaw and Zamat further teaches the topology map is updated when a new network device joins the network (see Wellard, column 8, line 58 to column 9, line 3).

Regarding claim 26, the combination of Wellard, Bradshaw and Zamat further teaches topology map is stored in the central controller of the wireless network (see Wellard, column 6, lines 11-16 and column 9, lines 58-60).

Regarding claim 27, the combination of Wellard, Bradshaw and Zamat further teaches topology map is broadcasted in the whole network (see Wellard, fig.2).

Regarding claim 28, the combination of Wellard, Bradshaw and Zamat further teaches only the parts of the topology map related to a specific network device are transmitted to specific network device (see Wellard, column 5, lines 46-52).

Regarding claim 30, the combination of Wellard, Bradshaw and Zamat further teaches the measurement phase and/or reporting phase is initiated by the network device creating the topology map (see Wellard, column 3, lines 14-28).

Regarding claim 31, claim 31 is rejected with the similar reason as set forth in claim 1 above.

6. Claims 6 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bradshaw, Jr. (US 6,236,854) in view of Wellard et al (US 5,862,477) and further in view of Zamat (US 6,321,068) and Pelech et al (US 6,243,585).

Regarding claims 6 and 25, the combination of Wellard, Bradshaw and Zamat teaches the method according to claims 1 and 20. The combination of Wellard, Bradshaw and Zamat does not specifically disclose the topology map is updated after a predetermined amount of time.

Pelech teaches the topology map is updated after a predetermined amount of time (see column 10, lines 10-19).

Therefore, it would have been obvious to one of the ordinary skill in the art at the time the invention was made to provide the above teaching of Pelech to the system of Wellard, Bradshaw and Zamat so that there is little or no interruption in service to the wireless terminals (see Pelech, column 10, lines 16-19).

7. Claims 10 and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bradshaw, Jr. (US 6,236,854) in view of Wellard et al (US 5,862,477) and further in view of Zamat (US 6,321,068) and Jennings,III (US 6,173,191).

Regarding claims 10 and 29, the combination of Wellard, Bradshaw and Zamat teaches the method according to claims 1 and 20. The combination of Wellard, Bradshaw and Zamat does not specifically disclose the calibration signal is transmitted using an omni-directional antenna.

Jennings teaches the calibration signal is transmitted using an omni-directional antenna (see Column 3, lines 65-67 and see column 14, lines 13-16).

Therefore, it would have been obvious to one of the ordinary skill in the art at the time the invention was made to provide the above teaching of Jennings into the system of Wellard, Bradshaw and Zamat in order to transmit the calibration signal in all direction.

8. Claims 15-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bradshaw, Jr. (US 6,236,854) in view of Wellard et al (US 5,862,477) and further in view of Zamat (US 6,321,068) and Feng (US 5,374,936).

Regarding claim 15, the combination of Wellard, Bradshaw and Zamat teaches claim 13. The combination of Wellard, Bradshaw and Zamat does not specifically disclose a calibration decoder that initiates the broadcast of a calibration signal and the measurement of the reception quality of one or more incoming calibration signals upon reception of a measurement control signal.

Feng teaches a calibration decoder (see fig.3 box 28 and box 32) that initiates the broadcast of a calibration signal and the measurement of the reception quality of one or more incoming calibration signals upon reception of a measurement control signal (see column 2, lines 18-21).

Therefore, it would have been obvious to one of the ordinary skill in the art at the time the invention was made to provide the above teaching of Feng into the system of Wellard, Bradshaw and Zamat so that signal transmitter can be activated directly or remotely, actively or passively (see column 1, lines 30-31).

Regarding claim 16, the combination of Wellard, Bradshaw and Zamat teaches claim 13. The combination of Wellard, Bradshaw and Zamat does not specifically disclose the calibration decoder initiates the transmission of one or more measurement results upon reception of a reporting control signal.

Feng teaches the calibration decoder (see fig.3 box 28 and box 32) initiates the transmission of one or more measurement results upon reception of a reporting control signal (see column 2, lines 18-21 and see fig.2, multiple arrows or multiple output or input from each device).

Therefore, it would have been obvious to one of the ordinary skill in the art at the time the invention was made to provide the above teaching of Feng into the system of Wellard, Bradshaw and Zamat so that signal transmitter can be activated directly or remotely, actively or passively (see column 1, lines 30-31).

Regarding claim 17, the combination of Wellard, Bradshaw and Zamat teaches claim 13. The combination of Wellard, Bradshaw and Zamat does not specifically

disclose a report encoder that receives one or more signal quality indication signals and encodes therefrom a signal quality control signal to be transmitted to the other network device.

Feng teaches a report encoder (see fig.3 box 28 and box 32) that receives one or more signal quality indication signals and encodes therefrom a signal quality control signal to be transmitted to the other network device (see fig.2, multiple arrows or multiple output or input from each device).

Therefore, it would have been obvious to one of the ordinary skill in the art at the time the invention was made to provide the above teaching of Feng into the system of Wellard, Bradshaw and Zamat so that signal transmitter can be activated directly or remotely, actively or passively (see column 1, lines 30-31).

***Conclusion***

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nghi H. Ly whose telephone number is (571) 272-7911. The examiner can normally be reached on 8:30 am-5:30 pm Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marsha Banks-Harold can be reached on (571) 272-7905. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Nghi H. Ly